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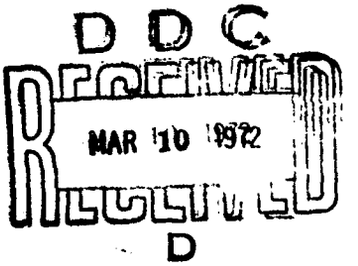
Calendar, Mod 0, An Automated Fortran Calendar for Managers

ANNA BYRD MAYS

Research Computation Center
Mathematics and Information Sciences Division

December 1971



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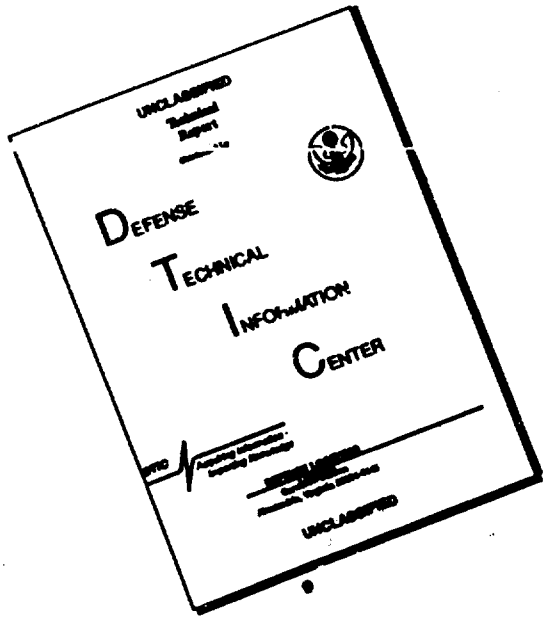

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A final report on one phase of the problem; work is continuing on other phases.

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13 ABSTRACT

CALENDAR, MOD 0, is a computer-based system designed to produce printout for each user of his forthcoming appointments for as many months in the future as desired. The system is run daily, and can in concept handle as many as 100 users. It is mainly useful to individuals who typically schedule many appointments each day and are forced constantly to reschedule many of them as a result of day-to-day re-arrangements in their busy schedules.

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Computer programs						
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CONTENTS

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PROBLEM STATUS

A final report on one phase of the problem; work is continuing on other phases

AUTHORIZATION

NRL General and Administrative Function 78-1601

CALENDAR, MOD 0, AN AUTOMATED FORTRAN CALENDAR FOR MANAGERS

0.0 INTRODUCTION

CALENDAR, MOD 0, is a computer-based system designed to produce printout for each user of his forthcoming appointments for as many months in the future as desired. The system is run daily, and can in concept handle as many as 100 users. It is mainly useful to individuals who typically schedule many appointments each day and are forced constantly to reschedule many of them as a result of day-to-day rearrangements in their busy schedules.

The following writeup describes the system which can be viewed from at least two vantage points, namely, (1) that of the user who is interested in what the system can do for him and what he must do to use the system and (2) that of the programmer who wants to implement and maintain the system for the user population. This writeup is intended to satisfy the user and only give the programmer enough information to know if he can consider the possibility of implementing it (i.e., whether or not it would be of use to his group, whether he has sufficient machine space available, etc.) but not enough information to actually allow him to proceed with implementation. There exists further internal documentation maintained by the author for this purpose.

1.0 IDENTIFICATION

1.1 Title

An automated calendar for managers

1.2 Identification Name

SO-NRL-CALENDAR

1.3 Classification Code

SO - Information Retrieval, General

1.4 RCC Identification Number

S0001R00

1.5 Entry Points

BIG SIB (name of controlling routine in the main partition of the overlay)

1.6 Programming Language

Language: 3600/3800 FØRTRAN, CØMPASS 5.3

Routine Type: program

Operating System: Drum Scope 2.1

1.7 Computer and Configuration

CDC-3800

1.8 Contributor or Programmer

Anna Byrd Mays, Code 7817
Research Computation Center (RCC), Mathematics and Information Sciences Division

1.9 Contributing Organization

NRL - Naval Research Laboratory
Washington, D. C. 20390

1.10 Program Availability

1.10.1 Submittal: Program writeup

1.10.2 On File: This writeup is intended to describe the use of CALENDAR at the user level. The program is in daily operation at the RCC. Anyone desiring to use the system should contact Code 7810 or the author in order to make necessary arrangements. If the reader is interested in obtaining the system for use elsewhere, he should contact the author. (The actual source language program is approximately 16,500 cards in length and consists of about 120 routines.)

1.11 Verification

Calendar was used in-house by the RCC during March 1971 and the major bugs were corrected. Calendar has been in operation for use by non-RCC persons since early April 1971 with no major problems. Small bugs still appear from time to time and are fixed as time permits and/or urgency dictates. (The *WEEKLY feature has not yet been fully tested.)

1.12 Date

November 1971

2.0 PURPOSE

2.1 Description of the Routine

The program provides the user with an automated calendar that functions as a schedule of events and reminder calendar; that is, the user can enter and erase scheduled events and messages from his calendar by specifying date, time, and the messages. The user receives a fresh

copy of his calendar daily. This is an interim phase of a continuing project.

2.2 Problem Background

The BIG SIB system in use by certain members of management at NRL since early 1968 (see reference (1) of Section 3.15) was originally intended to allow the users to send memos calling for action to appropriate addressees but gradually evolved into a clumsy but useful means of maintaining an automated calendar. In the summer of 1970 it became apparent that a new system was needed to provide a calendar that would function in a more natural manner and to return the original BIG SIB to its memo sending status. The ultimate goal was to add the calendar feature as a second pass to the original BIG SIB system. The new system would be known as BIG SIB and the two passes as ACTION MEMO and CALENDAR. At the present time the two passes are still operating as separate systems in daily use at the PCC and will presumably be joined at some later time. In creating the calendar feature all the necessary hooks have hopefully been provided to allow combining the two passes with a minimum of effort.

3.0 USAGE

3.1 Calling Sequence or Operational Procedure

This is a self-contained program requiring only input data. (CALENDAR coding forms are available in Room 113 of Bldg. 47 and completed forms should be returned to the same room for keypunching. The program is run as early as possible each weekday morning.) Sample coding forms are shown in Appendix B.

3.2 Arguments, Parameters, and/or Initial Conditions

The four control operations are as follows and are explained in detail in Appendix A.

*ENTER

*WEEKLY

*DELETE

*OUTPUT

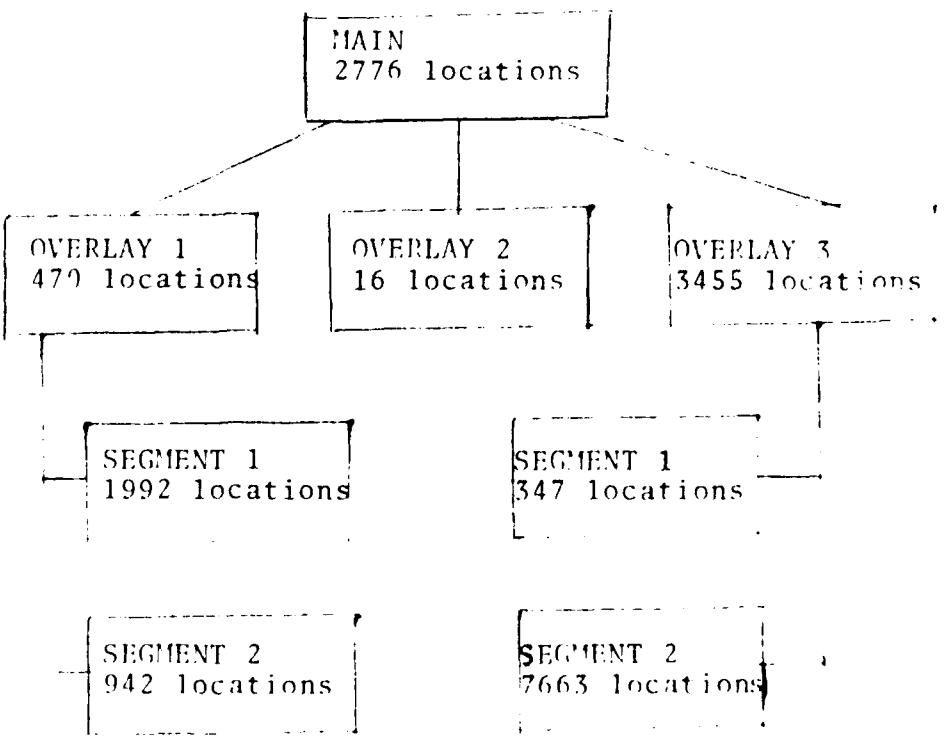
(As of this writing *WEEKLY has not been fully tested and users are asked to refrain from using it as time is not currently available to deal with any major problem that might arise.)

3.3 Space Required (Decimal)

(more detail is contained in reference (2), Section 3.15)

Figures are only approximate due to occasional minor system changes.

3.3.1 Unique Storage: (excluding library routines) (decimal)



(NOTE: Only main, one overlay and one segment may reside in memory at the same time.)

3.3.2 Common Blocks: (decimal)

The maximum requirements are as follows:

OVERLAY 1: 31799: OVERLAY 2: 1261;
OVERLAY 3: 33513

3.3.3 Temporary Storage

None

3.4 Messages and Instructions to the Operator

(more detail is contained in reference (2), Section 3.15)

These messages are to keep the operator informed of program status and are of no importance to the ordinary user.

3.5 Error Returns, Messages, and Codes

(more detail is contained in reference (2), Section 3.15)

These messages are of no importance to the ordinary user. If a user has errors in his input data, he will be informed by the RCC.

3.6 Informative Messages to the User

None

3.7 Input

In addition to the daily data there is a master tape on which all previous active data is preserved. See Appendix A for a description of the daily data and reference (2), Section 3.15 for a description of the master tape.

3.8 Output

The output consists of the calendar printout for the user (see Appendix A for a brief description), an optional program trace for debugging, a listing of errors detected in the daily input, an updated master tape, and several levels of backup. The system also requires numerous scratch units in serial mode, and one random access unit.

3.9 Formats

For detail see reference (2), Section 3.15

3.10 External Routines and Symbols

For detail see reference (2), Section 3.15

3.11 Timing

Presently the system has a total output of about 17,000 lines and the running time is about 10 minutes. This includes about 9 calendars covering a year each and 7 calendars covering two months.

3.12 Accuracy

Not applicable.

3.13 Cautions to Users

None

3.14 Program Deck Structure

(This is for system use and is of no concern to the ordinary user.)

```
JOB(26),781601M,959CAL,45
DEMAND, 53320B
EQUIP,24=PR
EQUIP,25=PR
EQUIP,28=PR
EQUIP,34=RA
EQUIP,29=(CAL OV R1,,,999),HI
EQUIP,11=(CALENDAR,,,999),HI,RW
EQUIP,31=(CALENDAR,,,999),HI
EQUIP,14=(CALENDAR,,,999),HI
EQUIP,43=(CALENDAR,,,999),HI,RW
EQUIP,44=(CALENDAR,,,999),HI,RW
LOADMAIN,29,45,90000,0
data cards
77
88(end-of-file card)
```

3.15 References-Literature-Appendices

References:

(1) Memorandum 7810-122:ABB:dgw, 9 August 1968

(2) Informal internal CALENDAR system documentation maintained by the author.

Appendices:

Appendix A - CALENDAR: MØD 0, USER INSTRUCTIØNS

Appendix B - SAMPLE CØDING FØRMS

(a) Calendar Entry Form
(b) Calendar Memo Form
(c) Calendar Weekly Form

4.0 METHOD OR ALGORITHM

The calendar system is composed of three overlays. Overlay 1 (INPUTTER) reads in all the data for the day, does some preliminary processing of it and sifts it into groups based on transaction. These groups are then sorted in appropriate order for later processing in overlay 3. Overlay 2 (ACTNMEMØ) is presently a dummy but is intended to process the action memos and place the hardcopy output on scratch so that it can be printed along with the users calendar, if any. Overlay 3 (CALENDAR) performs the transactions in chronological order one user at a time and prints his calendar. It then creates an updated master tape and daily and weekly backup tapes.

5.0 FLOWCHART AND/OR SOURCE LANGUAGE LISTING

See Reference (2), Section 3.15

6.0 COMPARISON

No other program is known to exist that performs the functions of CALENDAR.

7.0 TEST METHOD AND RESULTS

See Section 1.11, Verification

8.0 REMARKS

None

APPENDIX A

CALENDAR: MØL 0, USER INSTRUCTIONS

I. Brief description of the two types of messages

A. CALENDAR ENTRIES are entered into the system via *WEEKLY or *ENTER (option 2 see II.A.1.b) and result in the construction of a calendar for the user. The *ENTER card specifies the user's code. This is followed by a card containing the date and beginning and ending time of day and text and can be followed by an additional card of text. An entry may be deleted via *DELETE. Calendar entries automatically expire** when the date of the entry arrives. Weekly entries will not appear in the calendar until some *ENTER has been used which references the particular month containing that week.

B. CALENDAR MEMOS are associated with a date (but not with a time of day) and appear within the Calendar printout. Calendar memos are entered via an *ENTER (option 1 see II.A.1.a) card specifying the user's code and the date. Also specifiable are date of last printout and a priority. A calendar memo has 1-5 cards of text. The system assigns to each calendar memo a unique memo number consisting of 1 alpha character ("C") and up to 5 digits. Any calendar memo may be deleted via *DELETE.

II. Details of control operations

A. The operations

1. *ENTER: Creates either a calendar entry or a calendar memo. A calendar entry appears every day until it automatically expires on the calendar date or is deleted via *DELETE. A calendar entry with a date and time of day corresponding to an already

**When an item "expires" on day n, it is printed for the last time on day n.

existing entry will displace the earlier entry; thus, the last *ENTER in for a calendar entry will displace any earlier ones. Any entries already in the system (as opposed to those in the current day's data) that are displaced will appear as a special section of output following the printout for the appropriate month.

a) Option : *ENTER for Calendar Memos

Card 1:

Cols 1 - 6: *ENTER

10 - 16: The name of the recipient of the calendar. (See section B1 below for format.) The name must start in column 10. If blank, an error is incurred and the entry is not processed.

30 - 35: The date of the calendar memo expressed as MMDDYY. If blank, the date of the computer run is assigned.

40 - 45: The date of the last (terminating) printout for the calendar memo. If blank, the memo is printed until the date of the calendar memo arrives (the date in columns 30-35.) The memo then expires.

60: Priority of calendar memos (0-9,A-Z). A blank is assigned 9 by the system. The priority definitions are left completely up to the user.

Card 2-n: $(2 \leq n \leq 6)$

Following the *ENTER card is the text (Columns 2-80). Five cards of text are permitted for calendar memos.

(b) Option 2: *ENTER for Calendar Entries

Card 1: Cols 1 - 6: *ENTER

10 - 16: The name of recipient of the calendar. (See section B1 below for format.) The name must start in column 10. If blank, an error is incurred and the entry will not be processed.

Card 2: 2 - 7: The date of the calendar entry expressed as MMDDYY.

9 - 12: The beginning time of day of the calendar entry. (See Section B3 below.) This field is optional.

19 - 80: Text

Card 3: (optional) 1: C (Required if the card is used for additional text.)

19 - 80: Text (optional)

Using this option the user supplies only one *ENTER card specifying the code. Following that are one or more calendar entries of up to two cards each in the format described above. If the date field (Cols 2-7 of Card 2) is left blank, the date from the previous entry is used. (If the date field of the first entry of an *ENTER is blank, the date of the computer run is assigned.) If the start time field (Cols 9-12 of Card 2) is blank, a pseudo time made up of alpha characters (AAAA,BBBB, etc.) will be assigned by the system. (26 pseudo times are allowed per day.) The pseudo times are listed in the printout following the actual time of day. This allows a user to place an entry into the system without having to specify an actual time of day.

2. *DELETE: The user can take direct action to delete any type of message by using a *DELETE card. A summary of all deleted messages will be printed in an arpropriate part of the output.

Cols 1 - 7: *DELETE

10 - 16: The name of the deletor. The form follows the rules for names and starts in Col 10. (See Section B1 below.) This must be the name of the recipient of the calendar.

29 - 34: The date of the calendar entry (applies only when deleting a calendar entry) or the day of the weekly entry (no embedded blanks--SUN,MON,TUE,WED,THU,FRI,SAT)

36 - 39: The starting time of day (HHMM) of the calendar entry (applies only when deleting a calendar entry). All the calendar entries for an entire day can be deleted by specifying the date in Columns 29-34 and the word <<ALL>> anywhere in Columns 36-39. Delete actions are processed first so that new entries for that day and/or time of day may be made in the same run.)

50 - 56: The number of the message to be deleted. This number is the number assigned by the system to calendar memos. (This field does not apply when deleting a calendar entry or a weekly entry.)

3. *OUTPUT: Used to establish the number of extra copies of output that a user wishes to receive. This remains in effect until the user changes it with another *OUTPUT card.

Cols 1 - 7: *OUTPUT

Cols 10 - 16: The name of the user (See Section B.1. below)

Cols 19 - 20: The number of extra copies (right-adjusted to column 20)

Cols 22 - 23: The number of complete copies among the extra copies. The remaining copies will have only this month and next month.

4. *WEEKLY:

Card 1: Cols 1 - 7: *WEEKLY

10 - 16: User's name (See Section B.1. below.)

Card 2: Cols 5 - 7: The day of the meeting (SUN,MON,TUE,WED, THU,FRI,SAT)

9 - 12: The beginning time of day (Blank is illegal)

14 - 17: Optional ending time of day

19 - 80: Text

Card 3: (optional) Col 1: C (Provided there is additional text)

19 - 80: Optional additional text

B. Special Rules

1. Names: 1 to 7 characters including alphas, numerics, special characters and blanks.

2. Dates: MMDDYY

3. Times: Expressed as a 4 digit number (HHMM) according to the 24-hour clock and to the nearest quarter hour; where, $01 \leq HH \leq 24$ and MM=00, 15, 30, or 45. A rounding rule will be applied so that times will round to the nearest 15 minutes and rounded times will replace the user assigned times. (e.g., 1342 rounds to 1345.)

4. Priority: 0-9, A-Z

5. Text: Uses columns 2 through 80.

6. Days for *WEEKLY: SUN,MØN,TUE,WED,THU,FRI,SAT

III. Printed Output

A) Each month starts on a new page and continues for as many pages as is necessary. The user's code is indicated at the top. A month with no entries or memos is not printed. Each month includes the following:

1) Date: MMDDYY
2) Day of the week: SUN, MØN, TUE, WED, THU, FRI, SAT
3) T ± integer indicating the number of days "date" is from "today"
4) Start time: HHMM
5) End time: HHMM (only if it was explicitly indicated on the *ENTER card.)
6) Text of the memos and entries
7) Special indicators

   * = First occurence of an entry or memo or a memo that has reached date of first printout.

   > = An entry that displaced another entry. The displaced entry(s) appear in a special category at the end of the month's printout.

8) Priority of the calendar memo
9) Date of last printout of calendar memos. It normally contains the date of last printout but will contain "expired" when the memo reaches date of last printout.
10) Memo number: This is used for calendar memos only.

(B) Each month has the month spelled out in the upper left and right corners of the first page.

(C) The memos for a day follow the entries for a day. Memos are ordered by memo number within priority. Entries are ordered by "start time". Entries with pseudo time (See Section II.A.1.b) follow entries with real time.

(D) The output for the current working day and the following two working days (holidays are not distinguished from normal working days) is printed in a special format as follows:

(1) Each page contains a full day.
(2) Prints all times (in 15 minute intervals), 0700 to 1800.
(3) Prints any other times as explicitly entered.

(E) The remainder of the current month and all of the following month are printed in a special format as follows:

(1) Prints a line for each weekday, even if there is no specific entry or memo for that day. A single line is skipped between days.
(2) Suppresses Saturdays and Sundays if there is no specific entry.
(3) Space is allowed on the output to separate weeks.
(4) Suppresses all times and months which have no entries.

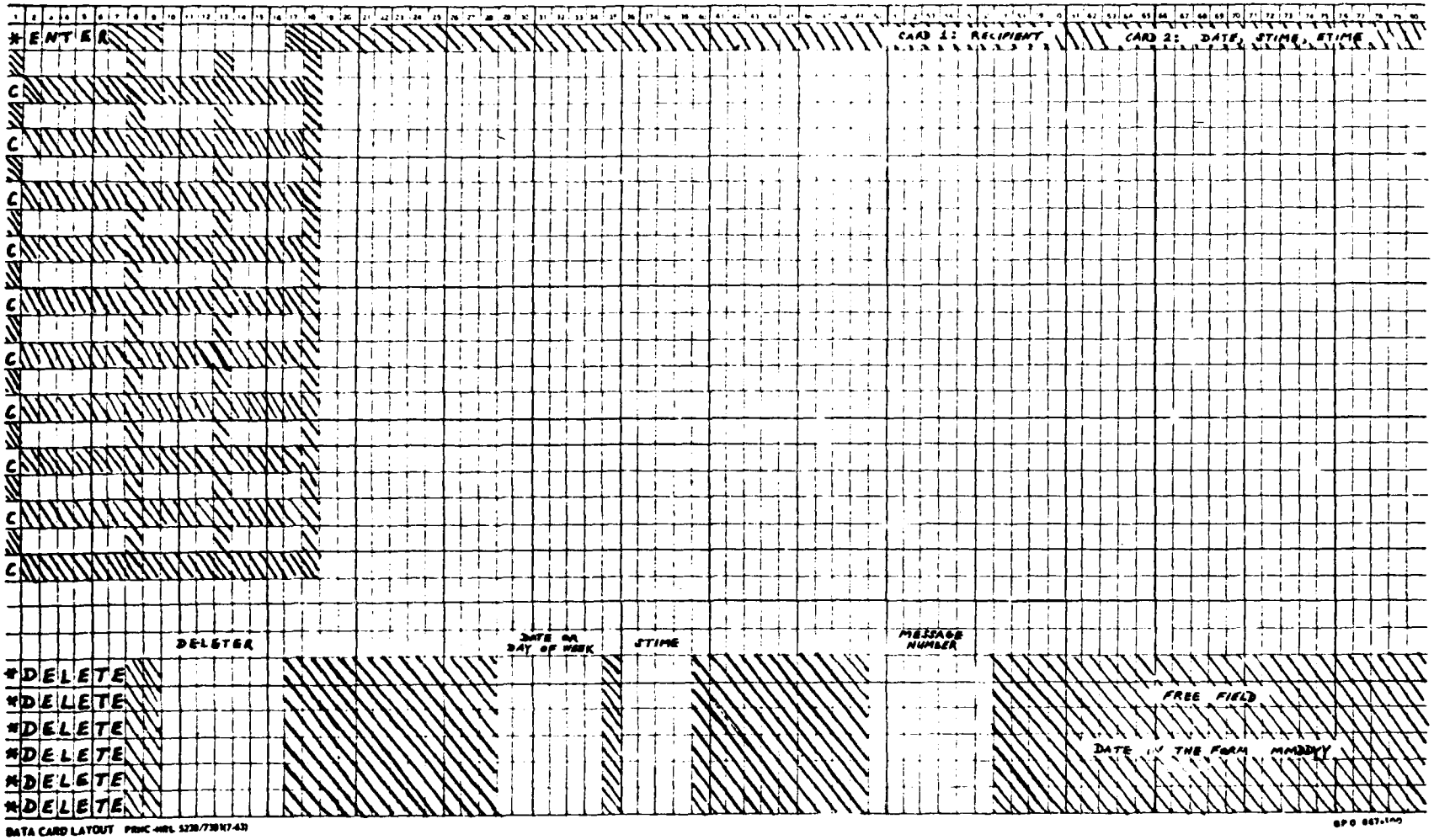
(F) The format for all other months is similar to (E) except days for which there is no entry or memos are omitted.

(G) Following each month's printout are two special categories: displaced calendar entries and deleted calendar entries and memos.

(H) Prior to the first month are listed by date all calendar memos with date of last printout prior to the date on which the calendar run is made.

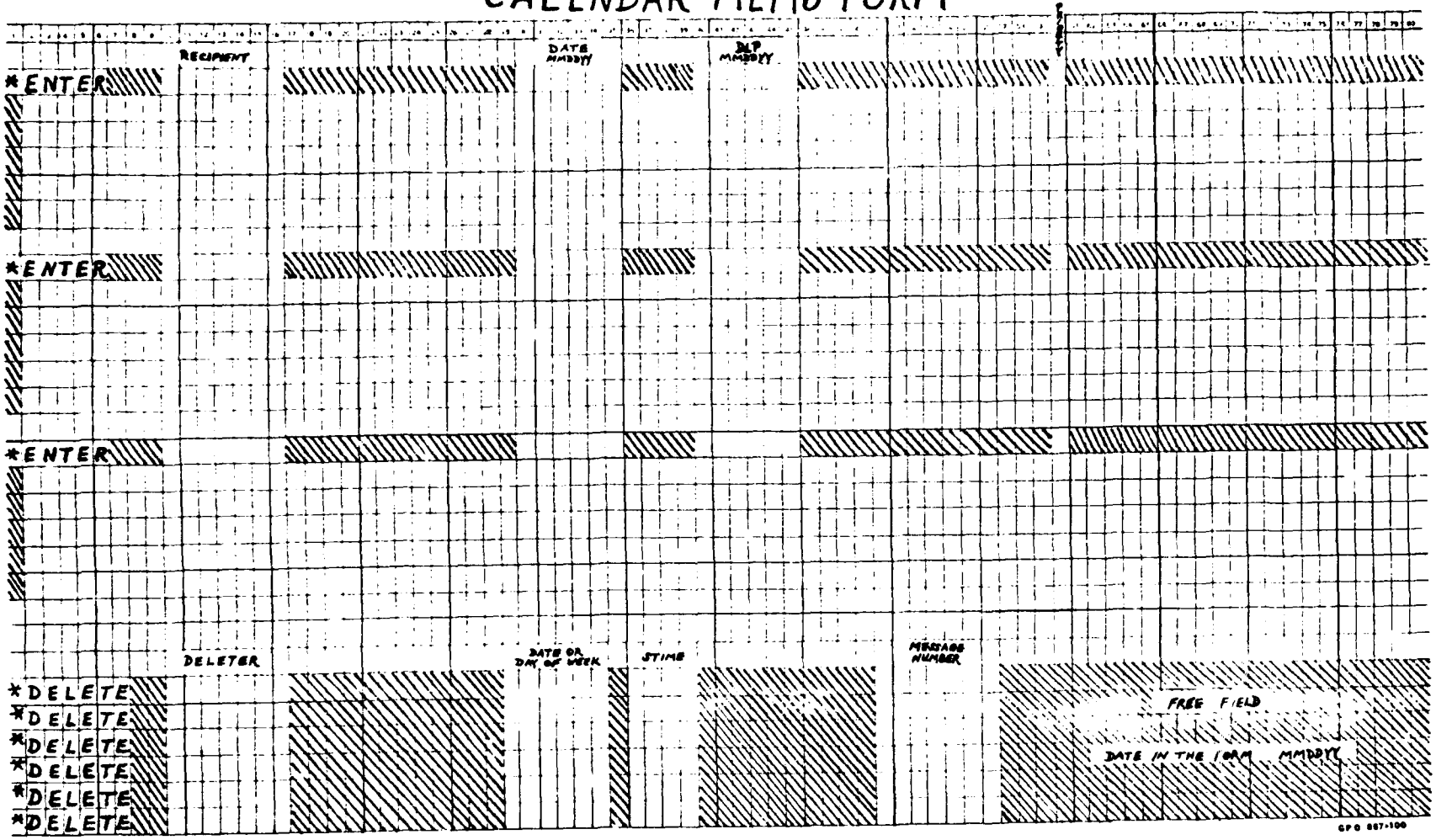
APPENDIX B

CALENDAR ENTRY FORM



DATA CARD LAYOUT

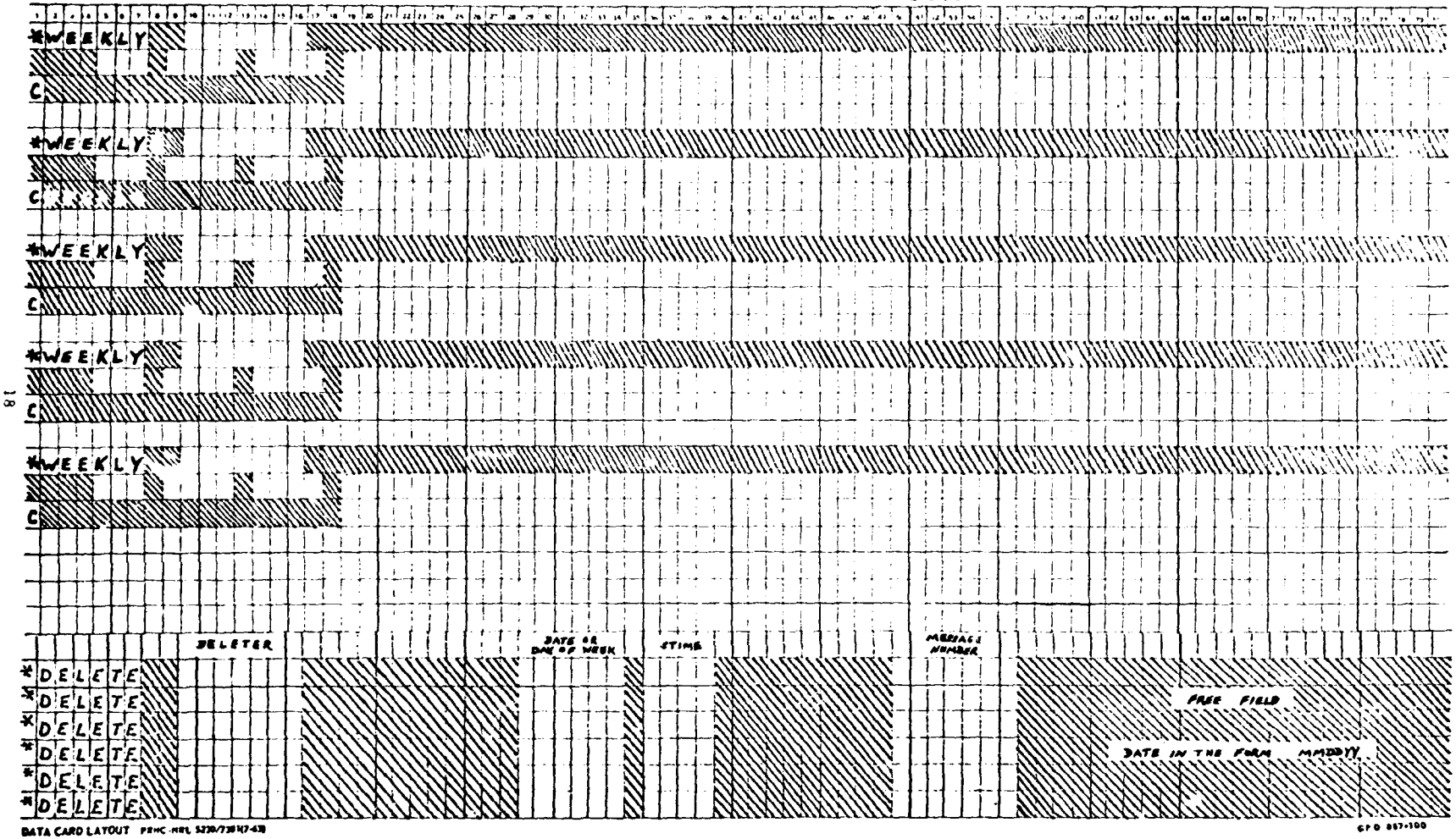
CALENDAR MEMO FORM



DATA CARD LAYOUT PRMC-NRL 5230 730-1(7-63)

GPO 887-100

CALENDAR WEEKLY FORM



DATA CARD LAYOUT PRMC-NRL 5230/73847-438

GPO 887-100

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